Table A-III/1 Guidelines for Assessment

Specification of minimum standard of competence

Officers in Charge of an Engineering Watch in a Manned Engine-room or Designated Duty Engineers in a Periodically Unmanned Engine-room

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STCW Competence	Knowledge, understanding and proficiency	Performance Condition(s)	Performance Behavior	Performance Criteria
Maintain Marine Engineering Systems, Including Control System	*Marine Systems* Appropriate basic mechanical knowledge and skills.	In workshop, given access to a lathe, mild steel rod stock and other necessary equipment and supplies,	The candidate will develop a plan and use the lathe to produce a project* in accordance with attached drawing (drawing #1), describing actions as they are being performed. * Project requires proficiency in lathe principles, faceplates or chucks and centers, material removal, thread cutting, and taper turning.	(1) Plan reflects proper sequence of actions and is complete; (2) Proper stock is selected and lathe operations are properly performed; (3) Project is completed according to plan, within tolerances specified in the drawing; (4) Actions taken are correctly and completely described; (5) No safety violations are observed.
	Undertake maintenance and repair to plant and equipment	Aboard ship or in workshop, given a centrifugal pump and other equipment, manuals and specifications needed to complete the task,	~~The candidate will develop a plan, dismantle pump and perform the following maintenance describing actions as they are being performed:~~ ~~? Examine and measure all parts for wear and deterioration;~~	(1) Plan reflects proper sequence of actions, is complete, and conforms to the requirements of manufacturer's instructions and ship's procedures; (2) Dismantling, examination and measurement,

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			~~? Re-fit and check all clearances;~~ ~~? Replace and adjust seals.~~ **NOTE: It is readily recognized that the candidate for OICEW fully comprehend the operation of a centrifugal pump. The above task should be done as part of their training. HOWEVER, this specific task is related to Table A-III/2 and not that of A-III/1, AND, should not be considered as an assessed proficiency**	assessment of wear or deterioration, re-fitting and clearance checks, and replacement/adjustment of seals is successful and conducted according to plan; (3) Actions taken are correctly and completely described; (4) Required steps taken are verified by assessor utilizing sample checklist as a guide; (5) No safety violations are observed.
		Aboard ship or in workshop, given a reciprocating pump and other equipment, manuals and specifications needed to complete the task,	~~The candidate will develop a plan, dismantle pump and perform the following maintenance on a reciprocating pump, describing actions as they are being performed:~~ ~~? Examine and measure all parts for wear and deterioration;~~	(1) Plan reflects proper sequence of actions, is complete, and conforms to the requirements of manufacturer's instructions and ship's procedures; (2) Dismantling, examination and measurement, assessment of wear or

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			~~? Machine and grind valves and seats;~~ ~~? Re-fit and check all clearances;~~ ~~? Remove and re-fit gland packing.~~ **NOTE: It is readily recognized that the candidate for OICEW fully comprehend the operation of a reciprocating pump. The above task should be done as part of their training. HOWEVER, this specific task is related to Table A-III/2 and not that of A-III/1, AND, should not be considered as an assessed proficiency**	deterioration, re-fitting and clearance checks, and machining and grinding valves and seats, re-fitting, and replacement of gland packing is successful and conducted according to plan; (3) Actions taken are correctly and completely described; (4) Required steps taken are verified by assessor utilizing sample checklist as a guide; (5) No safety violations are observed.
		Aboard ship or in workshop, given a gear pump and other equipment, manuals and specifications needed to complete the task,	~~When asked, the candidate will develop a plan, dismantle pump and perform the following maintenance on a gear pump, describing actions as they are being performed:~~ ~~? Examine and measure all parts for wear and~~	(1) Plan reflects proper sequence of actions, is complete, and conforms to the requirements of manufacturer's instructions and ship's procedures; (2) Dismantling, examination

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			~~deterioration;~~ ~~? Re-fit and check all clearances;~~ • ~~Replace and adjust seals~~. **NOTE: It is readily recognized that the candidate for OICEW fully comprehend the operation of a rotary pump. The above task should be done as part of their training. HOWEVER, this specific task is related to Table A-III/2 and not that of A-III/1, AND, should not be considered as an assessed proficiency**	and measurement, assessment of wear or deterioration, re-fitting and clearance checks, and replacement/adjustment of seals is successful conducted according to plan; (3) Actions taken are correctly and completely described; (4) Required steps taken are verified by assessor utilizing sample checklist as a guide; (5) No safety violations are observed.
		Aboard ship or in workshop, given a piping diagram and other equipment needed to complete the task,	The candidate will plan for and inspect a valve manifold, describing actions as they are being performed.	(1) Plan reflects proper sequence of actions, is complete, and conforms with ship's procedures; (2) Correctly: identifies contents of pipe; isolates pipe section; relieves pressure and drains pipe section; dismantles flanges and screwed

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				connections; cleans and inspects interior of pipe; cleans and prepares joints for re-assembly; selects and applies jointing material; re-assembles; hydraulically tests; eliminates any leakage; checks pipe supports; checks lagging and checks shrouding, if used; (3) Actions taken are correctly and completely described; (4) Required steps taken are verified by assessor utilizing sample checklist as a guide; (5) No safety violations are observed.
		Aboard ship or in workshop, given one of the following types of valves: safety valve, steam trap, quick closing valve, drain valve or relief valve, and other equipment needed to complete the task,	The candidate will plan for and perform a maintenance overhaul on a valve, describing actions as they are being performed. Of the nearly half dozen valve BASIC types, which valve type is this to be done? As part of the training process this task is necessary, **BUT,**	(1) Plan reflects proper sequence of actions, is complete, and conforms with ship's procedures; (2) Correctly: examines seats, valves and glands; machines valves and seats; beds in valves on seats using grinding paste; removes old

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			should not be considered as an assessed proficiency,	gland packing; selects replacement gland packing; re-packs glands; and tests, correcting any leaking; (3) Actions taken are correctly and completely described; (4) Required steps taken are verified by assessor utilizing sample checklist as a guide; (5) No safety or violations are observed.
		Aboard ship or in workshop, given a heat exchanger and other equipment needed to complete the task,	The candidate will plan for and perform an overhaul of the heat exchanger, describing actions as they are being performed. Of the many types/uses of heat exchangers, for which heat exchanger does this apply? As part of the training process this task is necessary, **BUT, should not be considered as an assessed proficiency**	(1) Plan reflects proper sequence of actions, is complete, and conforms with manufacturer's instructions and ship's procedures; (2) Correctly: dismantles and examines for leakage, corrosion, erosion and fouling; checks provision for tube expansion, de-scaling, replacing and plugging tubes, and checking tube tightness and means for reducing corrosion; and, fill and tests heat exchanger,

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				noting and correcting any problems; (3) Actions taken are correctly and completely described; (4) Required steps taken are verifie d by assessor utilizing sample checklist as a guide; (5) No safety violations are observed.
		Aboard ship or in workshop, given access to scavenging air receiver and other equipment needed to complete the task,	The candidate will drain scavenging air receivers of oil accumulation, describing actions as they are being performed. Does not apply to large low speed engines	(1) Opens drains, collects oil accumulation, observes oil outflow, closes drain and disposes oil; (2) Actions taken are correctly and completely described; (3) Required steps taken are verified by assessor utilizing sample checklist as a guide; (4) No safety or environmental violations are observed.
		Aboard ship or in workshop, given access to a clutch air system and other equipment needed to complete the task,	The candidate will perform routine maintenance on start and clutch air system, describing actions as they are	(1) Drains moisture separators and start air and clutch tanks; detects abnormal conditions, blows down

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			being performed. This is part of the start-up and/or watch standing procedures. To have singled this out is counterproductive and misleading as there are additional tasks that need to be identified for an effect proficiency assessment to be conducted.	compressed air strainers; (2) Actions taken are correctly and completely described; (3) Required steps taken are verified by assessor utilizing sample checklist as a guide; (4) No safety or environmental violations are observed.